Claims:

1. A system for communication between a host device and a peripheral device comprising:

a peripheral device to encode data and a host device to decode data under a Universal Serial Bus (USB) protocol to form a USB packet;

wherein:

the USB packet is encoded using a Bluetooth protocol to form a Bluetooth packet for the transmission between the host device and the peripheral device.

2. The system of claim 1, wherein the USB packet is encoded using the Bluetooth protocol by adding a transaction header to the USB packet so that the USB packet is included as payload in the Bluetooth packet.

3. The system of claim 2, wherein the peripheral device is a Human Interface Device (HID).

4. The system of claim 3, wherein the USB protocol is an HID protocol.

5. The system of claim 2, wherein a channel identifier (CID) is used to identify each endpoint of one or more endpoints associated to the peripheral device.

6. The system of claim 2, wherein the Bluetooth protocol utilizes a logical link control and adaptation protocol (L2CAP) to provide segmentation and reassembly (SAR).

7. The system of claim 6, wherein the Bluetooth packet is encapsulated into a L2CAP packet of a packet size in preparation for conversion to the one or more baseband packets for Bluetooth transmission.

8. The system of claim 7, wherein the Bluetooth protocol utilizes the L2CAP to provide SAR in the conversion of the L2CAP packet to the one or more baseband packets when the packet size is too large to include the information of the L2CAP packet in one baseband packet of the one or more baseband packets.

9. The system of claim 8, wherein the Bluetooth protocol utilizes the L2CAP to provide SAR when the packet size is larger than a maximum transmission unit of each baseband packet of the one or more baseband packets.

10. The system of claim 9,wherein the one or more baseband packet is capable of being transmitted from the host to the HID and from the HID to the host.

11. The system of claim 10, wherein upon transmission from the host to the HID, the HID is capable of recognizing any among a timeout, a data signal, or a stall signal.

12. The system of claim 11,wherein upon transmission from the HID to the host, the host is capable of recognizing any among a timeout, an acknowledgement signal, a non-acknowledgement signal, or a stall signal.

13. A method for communication between a host device and a peripheral device, comprising the steps of:

encoding data under a Universal Serial Bus (USB) protocol to form a USB packet; and

encoding the USB packet with a Bluetooth protocol to form a Bluetooth packet for transmission between the host device and the peripheral device.

14. The method of claim 13, wherein the USB packet is encoded using the Bluetooth protocol by adding a transaction header to the USB packet so that the USB packet is included as payload in the Bluetooth packet.

15. The method of claim 14, wherein the peripheral device is a Human Interface Device (HID).

16. The method of claim 15, wherein the USB protocol is an HID protocol.

17. The method of claim 14, wherein a channel identifier (CID) is used to identify each endpoint of one or more endpoints associated to the peripheral device.

18. The method of claim 14, wherein the Bluetooth protocol utilizes a logical link control and adaptation protocol (L2CAP) to provide segmentation and reassembly (SAR).

19. The method of claim 18, wherein the Bluetooth packet is encapsulated into a L2CAP packet of a packet size in preparation for conversion to the one or more baseband packets for Bluetooth transmission.

20. The method of claim 19, wherein the USB/Bluetooth protocol utilizes the L2CAP to provide SAR in the conversion of the L2CAP packet to the one or more baseband packets when the packet size is too large to include the information of the L2CAP packet in one baseband packet of the one or more baseband packets.

21. The method of claim 20, wherein the Bluetooth protocol utilizes the L2CAP to provide SAR when the packet size is larger than a maximum transmission unit of each baseband packet of the one or more baseband packets.

22. The method of claim 21,wherein the one or more baseband packet is capable of being transmitted from the host to the HID and from the HID to the host.

23. The method of claim 22, wherein upon transmission from the host to the HID, the HID is capable of recognizing any among a timeout, a data signal, or a stall signal.

24. The method of claim 23,wherein upon transmission from the HID to the host, the host is capable of recognizing any among a timeout, an acknowledgement signal, a non-acknowledgement signal, or a stall signal.

25. A system for communication between a host device and a Human Interface Device (HID) comprising:

a peripheral device to encode data and a host device to decode data under an HID protocol to form a Universal Serial Bus (USB) packet;

wherein:

the USB packet is encoded using a Bluetooth protocol to form a Bluetooth packet for the transmission between the host device and the peripheral device by adding a transaction header to the USB packet so that the USB packet is included as payload in the Bluetooth packet;

a channel identifier (CID) is used to identify each endpoint of one or more endpoints associated to the peripheral device;

the Bluetooth protocol utilizes a logical link control and adaptation protocol (L2CAP) to provide segmentation and reassembly (SAR).

26. The system of claim 25, wherein the Bluetooth packet is encapsulated into a L2CAP packet of a packet size in preparation for conversion to the one or more baseband packets for Bluetooth transmission.

27. The system of claim 26, wherein the Bluetooth protocol utilizes the L2CAP to provide SAR when the packet size is larger than a maximum transmission unit of each baseband packet of the one or more baseband packets.